Maldives

National Health Accounts 2014

Health Economics Unit,
Health Information and Research Section,
Policy Planning and International Health Division,
Ministry of Health, Maldives

June 2017

World Health Organization
Country Office for Maldives

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Contents

List of Tables

Appendices:

List of Figures

Foreword

The Maldives National Health Accounts series provides a detailed overview of resource flows in a health care system. It gives indications on where resources for health come from and where they are utilized. The completion of the second round of National Health Accounts provides a platform to compare the changes in the flow of health-care expenditures within a globally accepted framework underlying System of Health Accounts (SHA, 2011). This will also provide indication on the impact of recent government initiatives in health care expenditure reform on areas such as Out of Pocket Spending for health. Hence, I believe that such information can be used to inform decision makers to better orient health care financing reforms. Additionally, it plays a lead role in setting important benchmarks for evaluating the performance of health systems and assessing the impact of health policies in the future.

I take this opportunity to thank various divisions, institutions and departments including Policy Planning and International Health (PIH) Division, National Social Protection Agency (NSPA), Accounting and Finance Division and others in the Ministry to have offered support in providing data in time. I would also like to collectively acknowledge the contribution of all the other partners, including development partners, insurance agencies, enterprises and other line ministries and many related officials who provided quality data in a timely manner. With this, I extend my appreciation for the continuous support provided by World Health Organization in the compilation of Maldives National Health Accounts series.

On a final note, it is envisaged that National Health Accounts 2014 will greatly contribute to strengthening of health care system in the country where resource flows are monitored to ensure better allocation. I am confident that National Health Accounts 2014 will continue to play a key role in shaping the health care reforms in the country.

Abdulla Nazim Ibrahim

Minister of Health

Preface

It gives me immense pleasure to share that Maldives is one of the country in region to have been successfully producing NHA estimates in quick succession and this round of NHA estimates confirms to the globally accepted new framework, System of Health Accounts, 2011.

Mapping financial architecture of health system in any country can be complex and inadequate. An attempt is made in this round of NHA to map potential sources of funds that flows into health system from several entities, and how it is routed through financial intermediaries and finally health care providers and functional categories. It is interesting to observe that Maldives has not only been able to accelerate public spending but is able to sustain it in the last few years. As a result of stepped up government expenditure, it is heartening to note that households burden on Out-Of-Pocket (OOP) spending has sharply and significantly declined in the last three years.

This piece of work is a joint product that the WHO country office was able to provide support to the Health Ministry, both technically and financially, so that timely and availability of quality evidence is used to inform health policy and programs in the country. I am confident that the new set of estimates would provide greater fillip in shaping health system and provide further direction in future policy making and programs in the health sector.

Dr Arvind Mathur
WHO Representative to Maldives

Acknowledgements

The Second Edition of Maldives National Health Accounts (NHA) for the year 2014 is a sequel to the first edition for the year 2011. The primary intent of producing NHA is to inform health policy and planning in the country. NHA provides a comprehensive understanding of financial flows in the health system of Maldives as a whole and while also provides insights into sectoral contributions, including the magnitude and pattern of health spending by government and private partners. The NHA estimate for 2014 is a result of the cooperation between the Ministry of Health (MoH) and the World Health Organization (WHO) and relentless efforts of the technical teams at all levels. Policy level leadership for this important work was consistently provided by Hon Abdulla Nazim Ibrahim, Minister of Health while MoH team in Policy Planning and International Health Division undertook the exercise of culling out both primary and secondary data, analysis and dissemination. Dr Arvind Mathur, WHO Representative to the Republic of Maldives led WHO coordination efforts and technical guidance throughout. In addition, implementation of the study would not have been possible without the contribution of the many individuals mentioned below.

The National Health Economics Team of the MoH with technical and financial support from WHO conducted the survey data collection and analysis. The current publication was drafted by Ms Moomina Abdullah; Director, Head of Health Information and Research Section along with Aishath Muneeza; Senior Administrative Officer and Dr. Sakthivel Selvaraj; the international consultant, under the able leadership of Ms Aishath Samiya; Deputy Director General, Head of Policy and Planning and International Health Division.

The team of peer and technical reviewers include the following key officials of the Ministry of Health of the Republic of Maldives: Ms KhadeejaAbdul Samad Abdulla; Permanent Secretary, Ms Aishath Samiya; Deputy Director General, Policy Planning and International Health Division; Maimoona Aboobakuru; Director General of Public Health, Health Protection Agency, Mariyam Shafeeg; Allied Health Insurance, Aminath Zeeniya; Assistant General Manager, Aasandha Company LTD, Hussain Zahid; Assistant General Manager, Aasandha Company LTD, Aminath Nafha; Assistant Director, National Social Protection Agency and Fathimath Shamah; Senior Research Officer, Policy Planning and International Health Division. Technical review and comments were provided by Mr. Chandika Indikadahena, HIS/HGF/HSF, World Health Organization, Geneva and Ms. Hui Wang, Health Financing Specialist, Health Economics and Planning, Department of Health Systems Development, WHO SEARO, New Delhi.

Administrative support and valuable guidance were provided by the staff of the Ministry of Health and the WHO Country Office Maldives.

Abbreviations

DHS	Demographic and Health Survey
GDP	Gross Domestic Product
HIES	Household Income and ExpenditureSurvey
HSC	Health Service Corporation
ICD	International Classification of Diseases
IGMH	Indira Gandhi Memorial Hospital
MDGs	Millinium Development Goals
MoFT	Ministry of Finance and Treasury
MoH	Ministry of Health
MVR	Maldivian Rufiyaa
NCD	Non Communicable Disease
NGO	Non Governmental Organization
NHA	National Health Accounts
NSPA	National Social Protection Agency
MFDA	Maldives Food and Drug Authority
HPA	Health Protection Agency
MBS	Maldives Blood Services
OECD	Organisation for Economic Co-operation and Development
OOP	Out-Of-Pocket Payments
PHI	Private Health Insurance
SDGs	Sustainable Development Goals
SHA	System of Health Accounts
STGs	Standard Treatment Guidelines
TB	Tuberculosis
THE	TotalHealthExpenditures
WHO	WorldHealthOrganization

Executive Summary

Given its status as an upper middle-income economy, Maldives' health system financing truly reflects its standing, as its health spending not only reflects the average of OECD countries, but continues to sustain the momentum in the recent past. As per the current estimates from NHA 2014, Maldives spent little over nine percent of its GDP on health care. During 2014, Maldives spent roughly MVR 4287 million as against 2767 million in 2011. As a result, government schemes during 2014, which included both treasury and insurance route funding, accounted for over two-thirds of all health spending in the country. In per capita terms, Maldives' overall spending stands at around MVR 12,641 during 2014 as against MVR 8646 in 2011, registering a 50 percent growth in a period of three years. In US dollar terms, this works out to USD 810 during 2014. Nearly half of the expenditure on health care in Maldives is reported to be incurred for accessing outpatient visits, while inpatient care accounted for over one-third (36.2%) of all expenses during 2014. However, the pattern of country's health spending underwent significant changes, from barely half of all spending during 2011 was prepaid and risk-pooled, as against 70 percent currently. This was made possible by a comprehensive coverage of both public health system and Aasandha health insurance scheme, financed primarily by tax funds. Thus, it is evident households' OOP declined significantly from nearly half of all health spending in 2011 to 30% in 2014.

Maldives has reached a stage where levels of health expenditure is notably adequate to meet its health needs, but several steps are required to realign spending pattern so that services are delivered effectively, resources utilized efficiently and funds distributed equitably. The rise of non-communicable diseases is certainly a pointer to the epidemiologic transition. While the current evidence suggest that financial resources allocated by the government is less than two percent for prevention and promotion.

Section I:
The Introduction

The Republic of Maldives appears to be reaching the end of road to demographic transition, as per evidence provided by Census, 2014. With over two-thirds of its population in the active adult category, the demographic dividend that the country must reap is potentially significant.

The Republic of Maldives appears to be reaching the end of road to demographic transition, as per evidence provided by Census, 2014. With over two-thirds of its population in the active adult category, the demographic dividend that the country must reap is potentially significant. Two key questions arise from the emerging demographic transition. Would the country be able to reap the benefits of demographic dividend, by i) making its population healthy; and ii) preparing prevention and promotion strategies that can address the growing elderly population and rise in chronic conditions and non communicable diseases? As the age structure of Maldives has turned favourable (Fig 1.1 and 1.2) and has already entered the phase of 'window of demographic opportunity', would it be able to achieve the 'first demographic dividend'? Maldives has already reached the status of upper-middle income country, whose GDP per capita accelerated rapidly from US $ 275 in 1980 to US $ 6,666 in 2013. The country has in recent times registered a rapid and remarkable economic growth rate of an average 7% during 2002-2013. As a result, impoverishment has declined rapidly from 23 % in 2003 to roughly 16% in 2010, as per national poverty line estimates.

The revenue buoyancy has indeed accelerated in recent years. The overall revenue as a percent of GDP has risen from 28% in 2006 to about 35.3% in 2015. During the same period, the tax-GDP ratio doubled from 12.6% to 25.8% respectively. The combined strength of a significant economic growth, accompanied by an increase in productive population, and a considerable leeway provided by a rapid acceleration in tax buoyancy, provides adequate legroom to step up public funding for social investments. The recent health policies and program appears to be in that direction, especially providing universal health coverage through Aasandha scheme, beginning from 2012.

Figure 1.1: Population Pyramid of Maldives, 1995

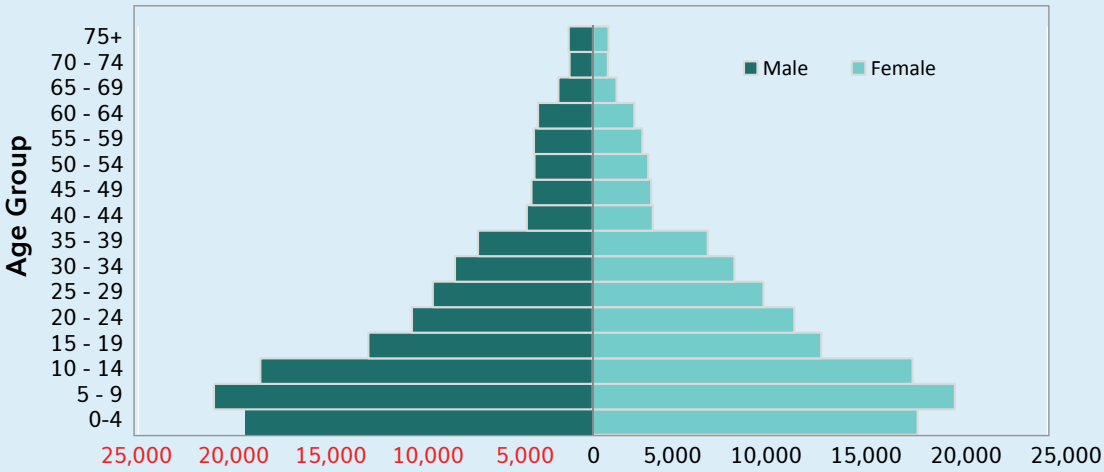
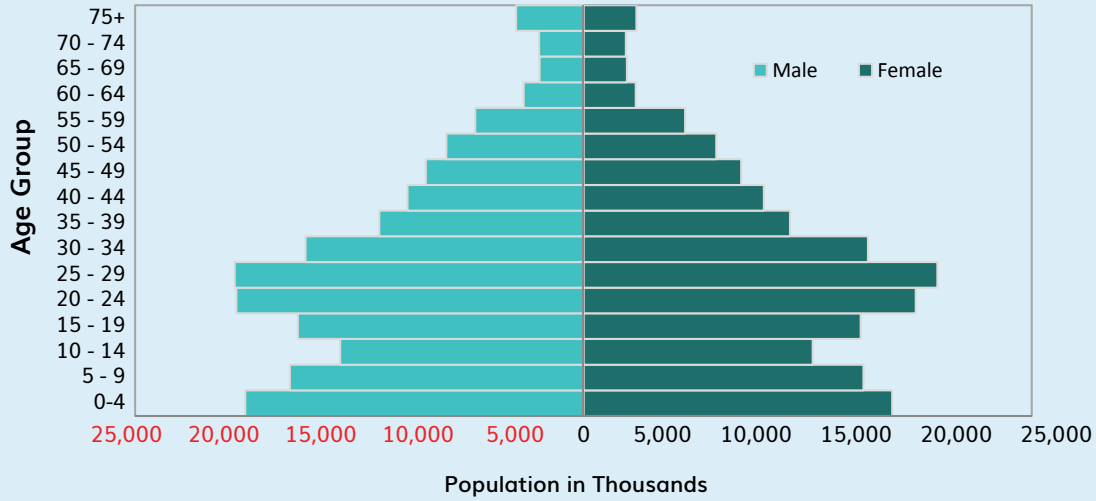


Figure 1.2: Population Pyramid of Maldives, 2014

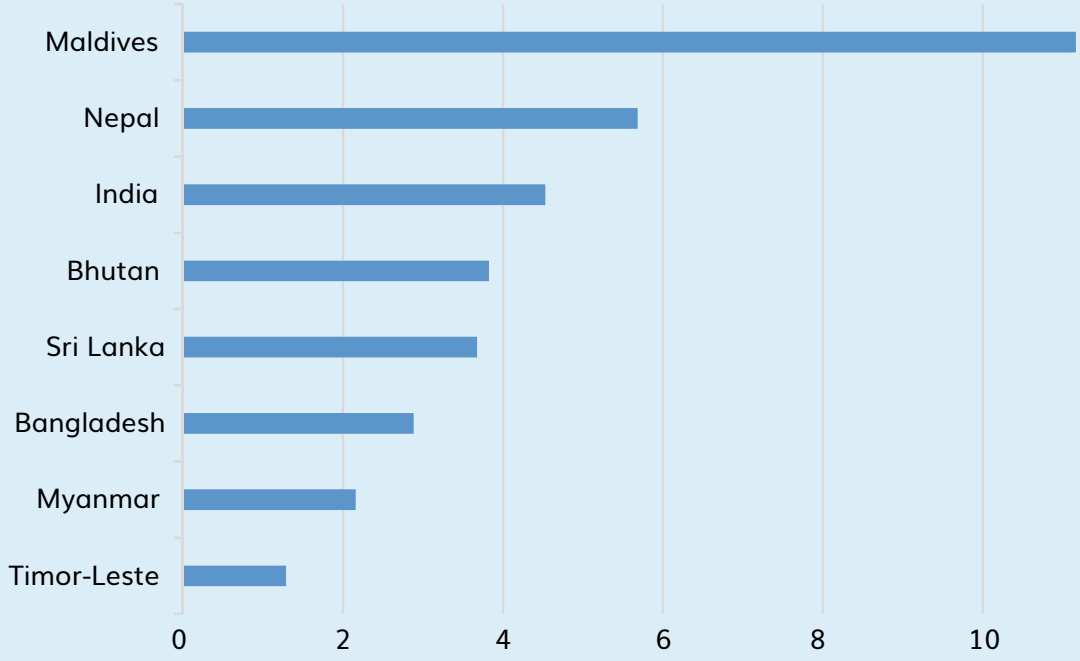


I.2: Key Health Expenditure Aggregates of Maldives and South Asian Nations

The health system financing of Maldives and its comparable countries in the region are characterized by deep diversity, both in terms of absolute amount of funds that flow into the health system and the contribution of that fund leading to questions of equity and efficiency. This section dissects some of the facets of health system financing in the South Asian regions vis-à-vis Maldives for the period spanning 1995 to 2014.

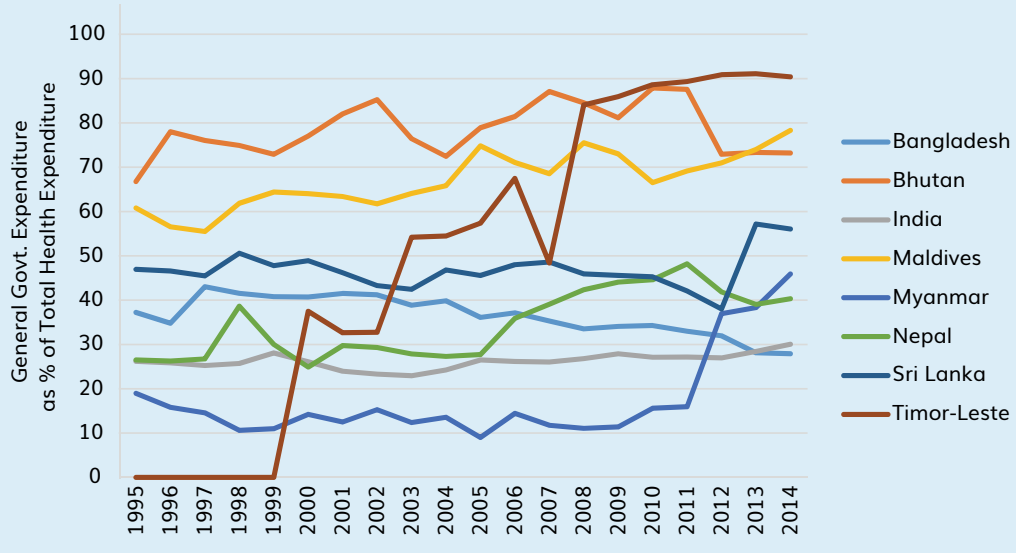
As per the latest evidence drawn from the Global Health Expenditure Database of WHO, it is apparent that the overall health spending measured as a percent of GDP of respective countries during 2013, was diverse - ranging from less than 2 percent in Timor-Leste to over 10 per cent in Maldives (Figure 1.3). Most countries in the region appear to spend in a range of 3-4 percent of GDP on health, perhaps reflecting that most of them are low or lower-middle income nations, while Maldives already enjoys the status of an upper-middle income nation.

Figure 1.3: Health Expenditure as a % of GDP among Select South Asian Nations, 2013



Source: Global Health Expenditure Database, WHO, 2017

Figure 1.4: Govt. Expenditure as percent to Total Health Expenditure, Comparator Countries, 1995-2014

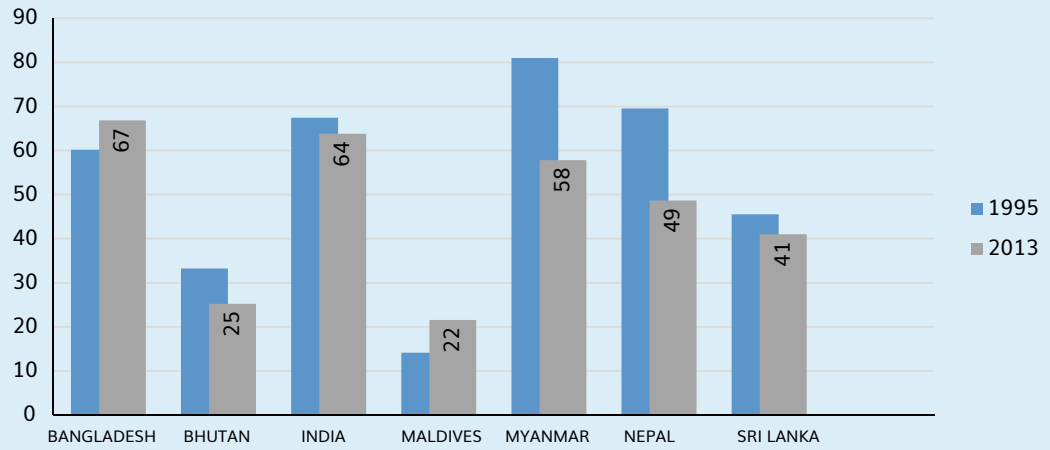


Source: *Global Health Expenditure Database, WHO, 2017*

Over the two decades spanning the period from 1995 to 2014, it may be worth observing from Figure 1.4 that government health expenditure in several countries in the region appear to have accelerated while in one or two countries public spending is observed to have dropped significantly. Bhutan and Maldives are the top two countries where in which general government expenditure contributed significantly to overall health spending. From about 60 percent in the mid-1990s, general government spending shot up to a phenomenal

78% of overall health spending in Maldives in the year 2014, while in Bhutan during the same period witnessed sharp rise from 67 percent to 73 percent. Because of such high spending, households' OOP expenditure has in fact stayed significantly lower in both Bhutan and Maldives during the period under consideration (Figure 1.5). The contribution of households' OOP was lower than 25 percent of overall health spending in both Bhutan and Maldives. Nepal and Sri Lanka reported twice that share while India, Bangladesh and Myanmar recorded even higher share by three times that of Maldives. Clearly, this goes to show that prepayment and risk pooling mechanism is relatively inadequate while in Bhutan and Maldives, a higher share of public spending had salutary impact in terms of lower OOP burden on households.

Figure 1.5 : Households' OOP Expenditure with Respect to Total Health Expenditure among South Asian Countries, 1995 and 2013



Source: *Global Health Expenditure Database, WHO, 2017*

I.3: Key Health Outcomes and Morbidity Patterns

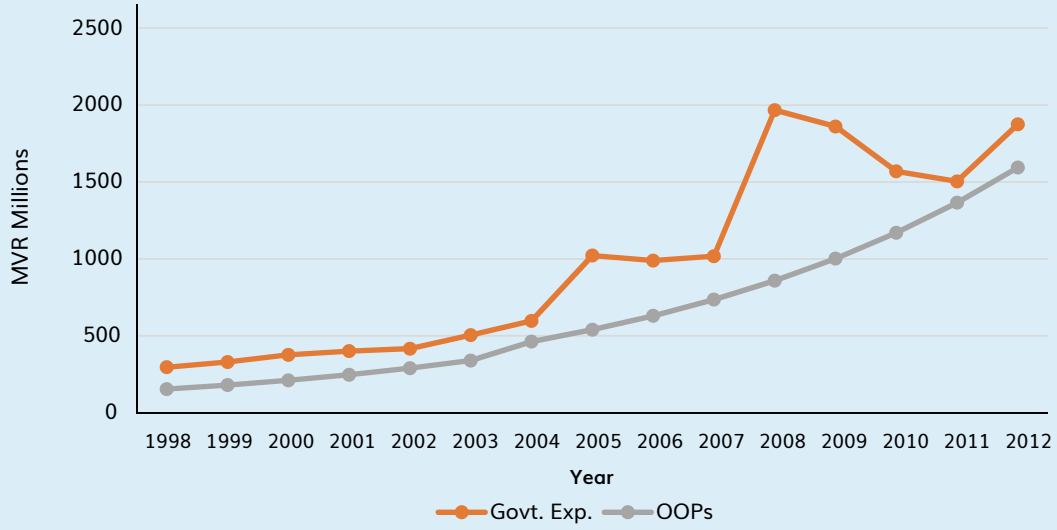
Reflecting its development stage, Maldives has registered impressive track record in achieving health outcomes. By achieving MDG health goals well before the 2015 target year, the country now boasts itself being the only South-Asian country to have achieved 'MDG+' goals. With longevity rising rapidly, male population is expected to live 73.13 years as against 74.77 years during 2014. This is against the life expectancy of 61 for females and 61.82 for males during 1990. The significant and rapid deceleration in infant mortality rate were 34 during 1990 to 8 per 1000 births during 2014. The corresponding reduction in under 5 mortality rate for the same period were 48 in 1990 to 10 during 2014. Similar decline was also noted for maternal mortality ratio from 677 per 100,000 live births in 1990 to 41 per 100,000 live births during 2014.

As far as communicable disease burden is concerned, it is remarkable to note that in 2016 Maldives have been declared free of malaria and lymphatic filariasis, while it is on the road to declaring itself free of eliminating vaccine preventable diseases such as measles and rubella. However, the country is grappling with its battle against frequent outbreaks of dengue. As the country is experiencing epidemiological transition, non-communicable disease conditions remain a challenge, compounded by several risk-factors. In terms of number of deaths due to ill-health, disability and early deaths, non-communicable disease conditions accounted for a formidable share of 78% including accidents, while the rest 22%

was due to combined burden of communicable diseases, reproductive and maternal, child health conditions[1].

Against a remarkable success in achieving broad health outcome measures, the rising double burden of disease and a significant challenge posed by current health systems to meet rising demands of population for its health needs, requires immediate attention. In recent years, although the country had achieved notable health outcomes, financial risk protection measure was considered inadequate. Over the past two decades, a sharp rise in households' Out-Of-Pocket (OOP) was noted. From MVR 153 million in 1998, there was an absolute increase in OOP levels to MVR 1594 during 2012 (Figure 1.6). The significant rise in OOP was largely due to growth of private facilities in Maldives. Besides, a part of the reason could be attributed to fees that used to be charged on patients. For instance, after IGMH was built in 1995, fees was charged for public hospital services and further atoll health facilities also started charging fees from patients. However, rapid acceleration in households' OOP in recent years appears to have been arrested, which declined from nearly half of overall health expenditure in 2011 to about 29 percent in 2014. It may be observed that though there are differences in the OOP figures reported by WHO, and the one recorded by Ministry of Finance in its GDP estimates, through households' final expenditure on Health. Pending reconciliation, it may be observed that as per the GDP estimates, households' final expenditure on health remained steady from MVR 827 million during 2011 to MVR 858 million during 2014. It appears that significant share of households' OOP is on account of expenditure associated with drugs and consultations. Further, it is also noted that a large rise in OOP in recent years is on account of rise in frequency of treatment abroad and rise in cost of medical care. From about 13 percent during 2003-04, treatment abroad share in households' expenditure accelerated to 32 percent during 2009-10[2]. The government had just concluded a nationally representative Household Income & Expenditure Survey 2016, while its report is expected to be released in 2017. This particular survey is expected to unpack several trends and pattern of evidence about OOP in recent years, especially the impact of Aasandha's universal health financing scheme ('HusnuvaAasandha').

Figure 1.6 : Household's Out-Of-Pocket Expenditure, Maldives, 1998 to 2012



Source: *The data relating to government expenditure and households' OOP is drawn from Global Health Expenditure Database.*

[1]*See NCD Policy Brief, 2011, Maldives. The burden is measured in terms of DALYs (Disability Adjusted Life Years).*

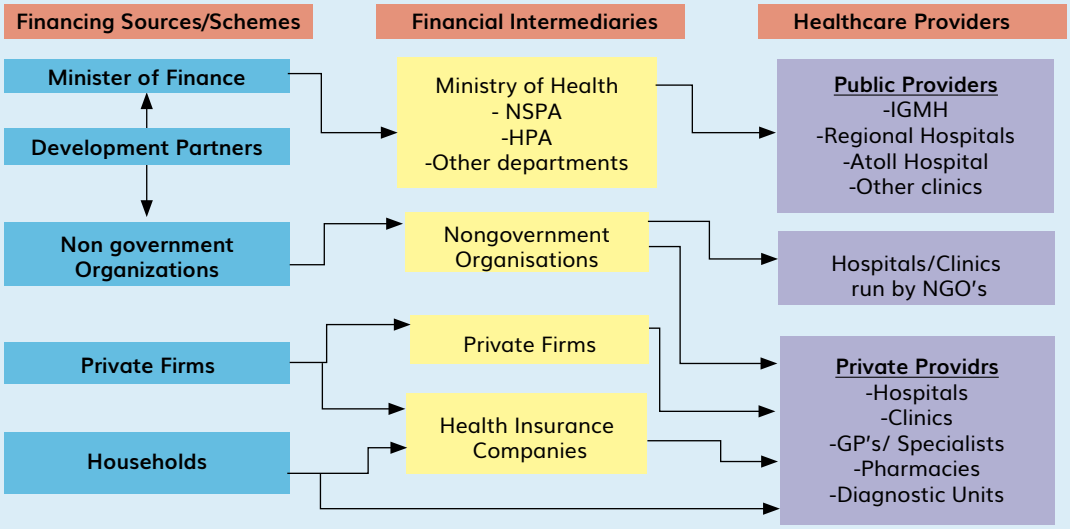
[2]*See World Bank (2013), Maldives Health Policy Note – 2, May 2013 (81248), pp. 2.*

I.4: Health System Financing Architecture in Maldives

Mapping financial architecture of health system in any country can be complex and inadequate. An attempt is made to map potential sources of funds that flows into health system from several entities, and how it is routed through financial intermediaries and finally health care providers (Figure 1.7). The key financial sources (or schemes, as described by SHA, 2011) in Maldives relate to Ministry of Health, routed primarily through Ministry of Finance, where funds are drawn from combined revenue of tax and non-tax funds of the government. In a public integrated model (payer and providers are government), the government funds routed through the Ministry of Health is utilized for providing health care services directly from its own health care facilities. On the other hand, in a public contract model– as in the Aasandha scheme in the year 2014, the government funds are channeled through a financial intermediary, namely a health insurance agency, while the intermediate agency purchases services, largely curative services, from both public and private health care providers. A range of public facilities provide health services, including large hospital (Indira Gandhi Memorial Hospital), regional hospitals, atoll hospitals, health centres and urban primary health centre (Dhamanaveshi). While private providers could take the form of a large hospital, private clinics and diagnostic facilities, private pharmacies, etc.

Households, on the other hand, largely spend their own income to purchase care directly from the private providers and to a lesser extent channels funds by buying voluntary private health insurance, which in turn, are expected to purchase health care services from private providers. In respect to private firms, funds allocated for employee's health benefits, are routed either through voluntary health insurance schemes, or by simply paying an annual lumpsum of reimbursement. In few cases of a large private firm (e.g in resorts), health benefits are provided in its own facilities, by a GP or a clinic. As far as Non-Governmental Organisations (NGOs) are concerned, which often takes up the task of providing preventive and curative care services, draws its funds largely from foreign donors and private partners, while it purchases care largely from private health facilities.

Figure 1.7: Health Financing Architecture in Maldives



Notes: NSPA – National Social Protection Agency; HPA – Health Protection Agency; IGMH – Indira Gandhi Memorial Hospital.

Section II:
The National Health Accounts (NHA) Estimates, Maldives, 2014

It may be observed that overall health spending, both current and capital expenditure, put together constituted 9.1 percent of GDP, while current expenditure alone worked out to 8.91 percent of GDP

As stated above, the health financing structure of Maldives have underwent significant change as a result of near comprehensive universal roll-out of government funded health insurance scheme, initially by Madhana scheme in 2009 (30% of population covered), which transformed into Aasandha scheme from 2012, with an annual upper limit per person of MVR 100,000 with coverage of all Maldivians. Later in 2014, this scheme was rebranded as 'Husnuva Aasandha' with the removal of the annual financial limit per person.

Table 2.1: Summary of National Health Accounts, 2011 and 2014

Description of Indicators	2011 In Million MVR (%)	2014 In Million MVR (%)
Total Govt. Budget	12,824.58	17,958.3
Govt. Budget on Health	1217.42	2834
Total Health Expenditure	2766.57	4287
Govt. Budget on health as a % of Total Budget	9.5%	15.78%
Govt. budget on health as a % of Total Health Expenditure	44%	66%
GDP Estimate for Maldives	29,936.00	47,122.22
GDP Per capita (In Rufiyaa)	93,550	136,974
Total Health Expenditure as a % of GDP	9.2%	9.1%
Public Sector Expenditure on Health as % of GDP	4.4%	6.2%
Private Sector Expenditure on Health as % of GDP	4.8%	2.9%
MoH Budget as a % of Govt. Budget	3.3%	9.4%
Household Out-Of-Pocket Expenditure as a % of Total Health Expenditure	49.0%	29.5%
Drugs as a % of Total Health Expenditure	17.0%	18.2%

II.1: Key NHA Aggregates of Maldives, 2014

The current NHA provides an opportunity to dissect the changes that has occurred, and its implications on overall public spending and in specific, households' OOP. It may be observed that overall health spending, both current and capital expenditure, put together constituted 9.1 percent of GDP, while current expenditure alone worked out to 8.91 percent of GDP (Table 2.1). Such high spending was made sustainable due to significant step up in expenditure by the MoH as well as Aasandha schemes in the year 2014 as compared to 2011. During 2014, Maldives spent roughly MVR 4287 million as against 2767 million in 2011 (measured in current terms).

In sharp contrast to 2011, public expenditure, both current and capital spending together, accounted for 6.20 percent of GDP during 2014, as against 4.4 percent reported in 2011. The overall government expenditure, which stood at MVR 2922 million during 2014, actually have more than doubled from MVR 1282 million in 2011, in current prices. As a result, government schemes during 2014, which included both treasury and insurance route funding, accounted for over two-thirds of all health spending in the country. In 2011, less than half of the nation's expenditure on health was sourced from the government coffers. It appears that a direct impact of a doubled spending by government is clearly reflected in reduced households' Out-Of-Pocket (OOP) expenditure. It is interesting to observe that households' OOP which stood at as high as 49 percent during 2011(NHA 2011), declined drastically to less than 30 percent, in a span of three years. Therefore, public to private spending ratio, which remained nearly 1:1 has moved to a positive territory of 2:1. As far as health spending in Maldives is concerned, 98% of all health expenditure is on account of current spending while the rest two percent is incurred on capital expenditure. In fact, the entire capital expenditure is incurred by the government, although overall capital spending is relatively abysmal, which needs attention in order to strengthen health system infrastructure. While it is possible that the private sector expansion of health facilities occurs with capital infusion, lack of data availability seriously compromises any comparison of private capital spending with government capital expenditure.

Table 2.2: Maldives National Health Accounts: Key Indicators, 2011 and 2014

Health Finance Indicators	MVR (Millions)		Share to Overall Health Expenditure		Share of GDP	
	2011	2014	2011	2014	2011	2014
a) Current Public Expenditure	1217	2834	43.98	66.11	4.07	6.01
b) Current Private Expenditure	1452	1365	52.48	31.84	4.85	2.90
i) Households OOP	1245	1265	49.33	29.51	4.16	2.68
c) Current Expenditure on Health (a+b)	2669	4199	96.46	97.95	8.92	8.91
d) Capital Expenditure on Health	98	88	3.54	2.05	0.33	0.19
e) Total Public Health Expenditure (a+d)	1315	2922	47.52	68.16	4.39	6.20
f) Total Health Expenditure (c+d)	2767	4287	100	100	9.24	9.10

Note: *i) Total public health expenditure was derived by combining current and capital government expenditure.*
ii) Households' OOP expenditure is inclusive of current private expenditure

In per capita terms, Maldives' overall spending stands at around MVR 12461 during 2014 as against MVR 8646 in 2011 (Table 2.2), registering a 50 percent growth in a period of three years (measured in current prices). In US dollar terms, this works out to USD 810 during 2014. Such spending pattern is almost double than the average of Upper-Middle-Income Countries (USD 436), twenty times more than Low-income economies (USD 40), one and half times lesser than the High-incomes countries (USD 2037)[3]. The rapid and notable rise in overall health expenditure in Maldives is primarily brought about by growth of public health expenditure from nearly MVR 3800 per capita in 2011 to close to MVR 8500 during 2014. In view of a robust acceleration in government spending during this period, households' OOP per capita stands at around MVR 3677 during 2014 as against MVR 4267 in 2011.

Table 2.3: Percapita Health Expenditure in Maldives, 2011 and 2014 (In MVR)

Health Finance Indicators	2011	2014
a) Current Public Expenditure	3803	8238
b) Current Private Expenditure	4841	3968
i) Households' OOP	4267	3677
c) Current Expenditure on Health (a+b)	8644	12206
d) Capital Expenditure on Health	306	256
e) Total Public Health Expenditure (a+d)	3804	8494
f) Total Health Expenditure (c+d)	8646	12461

Note: *i) Total public health expenditure was derived by combining current and capital government expenditure. ii) Households' OOP expenditure is inclusive of current private expenditure*

II.2: How are the Health Care Resources Mobilized and Who Pays for it?

The System of Health Accounts (SHA, 2011) defines health financing scheme as one which mobilises resources from several sources. For instance, the government health schemes, often obtains fund from Ministry of Finance and treasury , Ministry of Defence and National Security, other Ministries, and donors.In the context of Maldives, the government schemes takes into account spending by MoH, its departments, regional hospitals, atolls hospitals and other providers. It also includes spending by NSPA, but did not include spending by Cabinet and President Office on health, due to paucity of data. Similarly, a voluntary health insurance scheme can obtain funds from households, enterprises, etc. Non-governmental organisations often receive funds from government, foreign donors, households, etc.

In terms of current expenditure, the overall spending of health schemes in Maldives accounted for roughly MVR 4200 million (Table 2.3). As far as government schemes in Maldives is concerned, there are three sets of sources for which funds are received by the Ministry of Health. While the Ministry of Health directly receives funds for running its own health care facilities, besides incurring spending on several departments under its

[3]*For a comparison of health spending by income categories, see Somanathan (2016), First Universal Health Coverage Financing Forum – Raising Funds for Health, Background Draft Paper, The World Bank.*

mandate, the Ministry also receives funds from donors, including WHO, UNICEF, World Bank, etc. Besides, the Husnuvaa Aasandha Scheme (government funded health insurance scheme), although it comes under the ambit of Health Ministry, it was administered by a private health insurance company, formed through a joint venture. The accompanying Table 2.4 reveals that over two-third (67.5%) of all health schemes in Maldives are now covered by government schemes. This is in sharp contrast to the coverage of less than half by government schemes in 2011. Households contributed for the bulk of private health expenditure source in Maldives, accounting for 30% of all health schemes. The rest of the private health schemes included private enterprises funding and non-governmental organisations that mobilise resources and pays for purchasing health care services, although its contribution has been negligible ranging from 0.08% and 0.35% respectively. It may be noted that there are three ways in which private enterprises provides funds to its employees for health care service. While paying for premium for health insurance of its employees is one such method, enterprises also provide a fixed amount of reimbursements annually. Very few private enterprises, mostly the large organisations, also run its own health facilities, or ambulatory care facilities.

Health financing intermediaries/agents are the ones who are defined as institutional entities that manage or administer health financing schemes. It may be interesting to note that although government schemes are the largest during 2014, it may be operated by different players in the health system. It may be observed from Table 2.4, as a financial intermediary, although the role of voluntary health insurance schemes accounted for a paltry share (less than 2%), but the role of health insurance corporations substantially increased in the year 2014, since they managed over one-fourth (28.6 percent) of all funds in the Maldivian health system. A major chunk of this funding, around 93 percent, was routed by the government through Aasandha scheme. In addition to the government funded health insurance schemes, whose premiums are entirely paid by the government, the financial intermediaries also managed funds, to a limited extent, from households and private corporations.

Table 2.4: Health Financing Schemes, Maldives, 2014

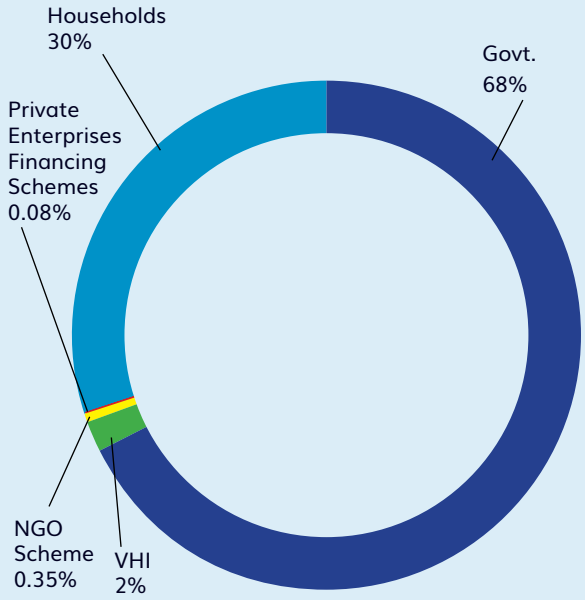
Health Financing Schemes	Total Expenditure (In MVR Million)	Percentage Share (%)	Per Capita Expenditure (In MVR)
Government Schemes	2834	67.5	8238
Voluntary Health Insurance Schemes	82	1.9	237
Private Enterprises Financing Schemes	3	0.08	9.0
Non Governmental Organisations' Schemes	15	0.35	42.2
Households	1265	30.1	3678
Overall	4199	100.0	12205

Note: *The government scheme spending does not include insurance covered for Parliament members and other independent commission members.*

Table 2.5: Who manages health care funds in Maldives?

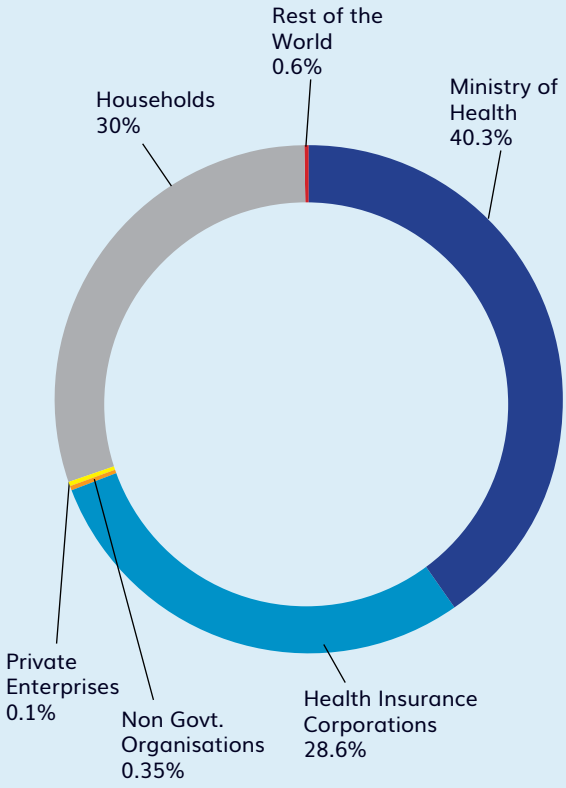
Health Financing Intermediaries	Total Expenditure (In MVR Million)	Percentage Share (%)	Per Capita Expenditure (In MVR)
Ministry of Health	1690	40.3	4913
Public Health Insurance Corporation (Aasandha)	1118.28	26.7	3251
Private Health Insurance Corporations	81.58	1.94	237
Private Enterprises	03	0.1	09
Non Govt. Organisations	15	0.3	42
Households	1265	30	3678
Rest of the World	25	0.6	76
Overall	4199	100	12205

Figure 2.1: How are Health Care Resources Mobilised in Maldives?



Source: Derived from Table 2.3

Figure 2.2: How are Health Care Resources Managed in Maldives?



Source: Derived from Table 2.4

Figure 2.3: Share of Prepaid and Risk-Pooled Funds, Maldives, 2014

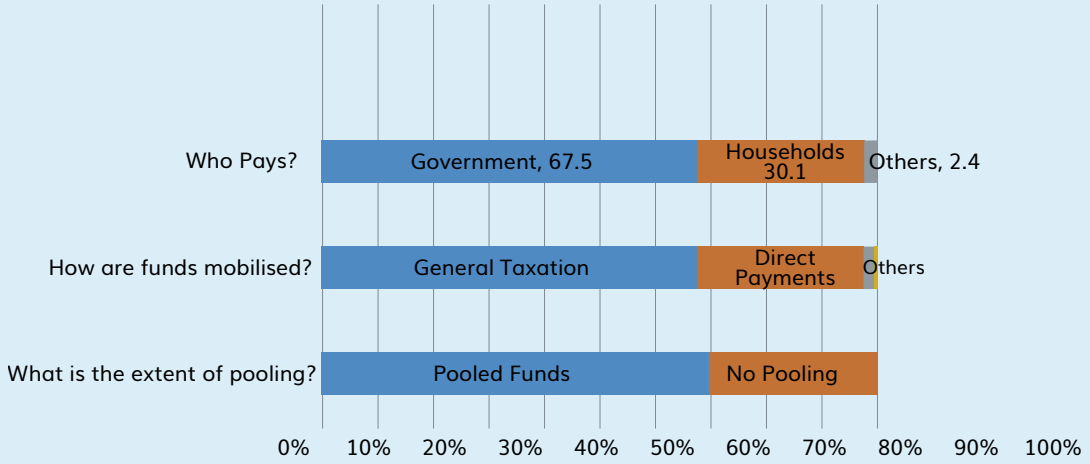


Table 2.6: What health care services are provided?

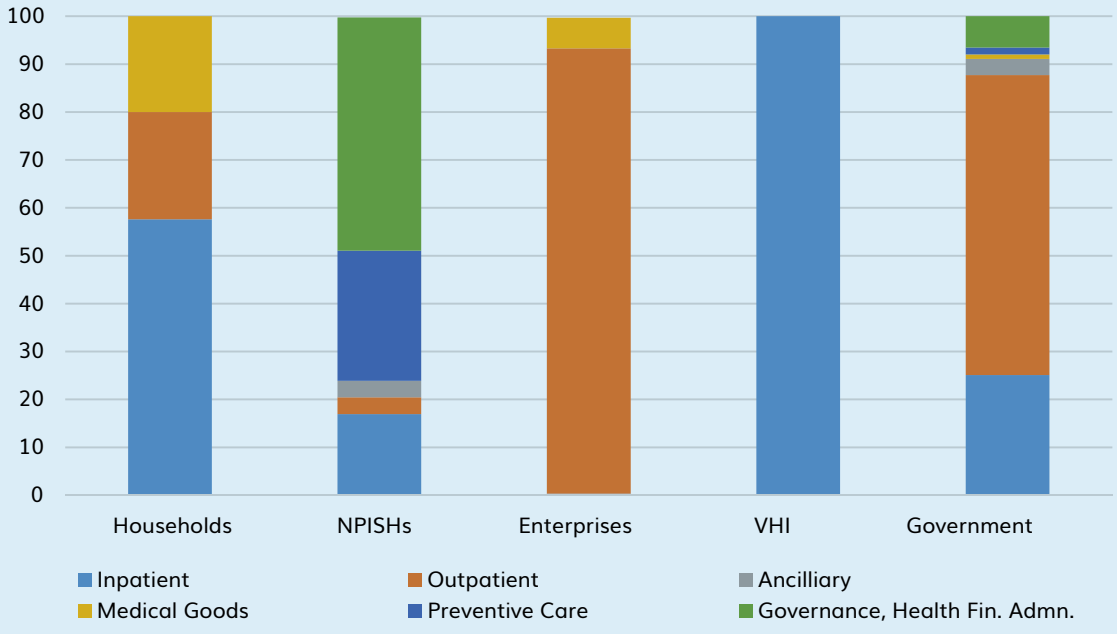
Health Financing Functions	Total Expenditure (In MVR Million)	Percentage Share	Per Capita Expenditure (In MVR)
Inpatient Expenditure	1520	36.2	4418
Day Care Spending	04	0.10	12.7
Outpatient Expenditure	2061	49.1	5992
Spending on Ancilliary Services	97	2.3	281
Expenditure on Medical Goods	279	6.6	812
Preventive Care Expenditure	45	1.1	130
Expenditure on Governance	193	4.6	560
Overall	4199	100	12205

Note: The expenditure reported in this table includes both government and private expenditure by functional categories. For a break-up of separate expenses by public and private care, see Section III. Ministry's own spending is considered as administrative expenses in respect to functional categories, the rest four departments under the Ministry (HPA, MFDA, MBS,), six regional hospitals and 13 atoll hospitals are taken into account under curative and preventive care. For instance, HPA's entire expenditure is considered to be part of preventive in nature including immunization, expenses for communicable and non-communicable disease conditions. Medical care goods expenditure includes those spending associated with households on medicines and supplies (prescription as well as over-the-counter medicines). However, this does not include government spending on medicines and supplies which are inseparable and are considered as part of outpatient and inpatient expenses category above.

As far as health care functions are concerned, it may be outlined as one in which health services are consumed by individuals and/or collectively for preventive, promotive, and curative purposes. In terms of the distribution of funds by health care functions, it may be observed that nearly half of the expenditure on health care (49.1%) in Maldives is reported to be incurred for accessing outpatient visits, including payments made by governments, households and other entities (Table 5). In 2011, the share of outpatient visits expenditure was nearly 20 percent. A logical conjecture that could be outlined here for a sharp rise in outpatient spending is primarily to do with Aasandha' spending on outpatient visits as well, which otherwise would have been incurred by households. The major components of such payments are funds that are incurred for paying health workforce, procuring drugs and diagnostics, etc. Expenditure on inpatient care, on the other hand, accounted for over one-third (36.2%) of all expenses during 2014, as compared to 46.9 percent in 2011. Although a significant spending towards drugs and diagnostics is expected, the share of medical goods in overall health expenditure is apparently 6.6 percent. It may be noted that such a small share is on account of the fact that under both inpatient and outpatient expenditure underlying government spending, all resources are bundled together as either inpatient or outpatient, including payments made by government for procuring drugs. Further, payments made by Aasandha for inpatient and outpatient, for undertaking treatment in both public and private health facilities are bunched together in respective components. Finally, since households' OOP per se has declined drastically during 2014, one would expect a sharp drop in drugs spending by households.

Preventive care assumes critical importance in any health system. While Maldives had established a specific health protection scheme through Health Protection Agency, the primary aim of the organization is to facilitate the health system in preparing and executing plans and programs for prevention of communicable and non-communicable diseases. The estimates for expenditure on prevention turned out to be insignificant, at 1.1 percent during

Figure 2.4: Financial Flows from Financing Schemes to Health Care Functions



Note: *The source for this figure is drawn from Matrix 3 in the annexure. Financing schemes in the above figure relate to households, NPISHs, Enterprises, VHI and Government, while health care functions relate to inpatient, outpatient, ancilliary services, medical goods, preventive care and governance, health financing administration.*

2014 as against 1.4 percent in 2011, which are reported entirely by government budget records. Available data from the budget records are only taken into account here. While it is possible that the Ministry of Health is spending significant amount of resources for prevention of disease conditions in Maldives, the current data structure is unable to tease out resources allocated for various prevention activities. Some of such resources which are difficult to differentiate as spending allocated for preventive activities include salary and other expenditure spent for public health units in the hospitals and salary of public health staff at health centres, MFDA spending relating to food laboratory and expenditure of food quality regulatory staff. Expenditure on governance and administration, including regulation of health activities, accounted for less than five percent of overall health spending in Maldives during 2014.

Table 2.7: Who provides health care in Maldives?

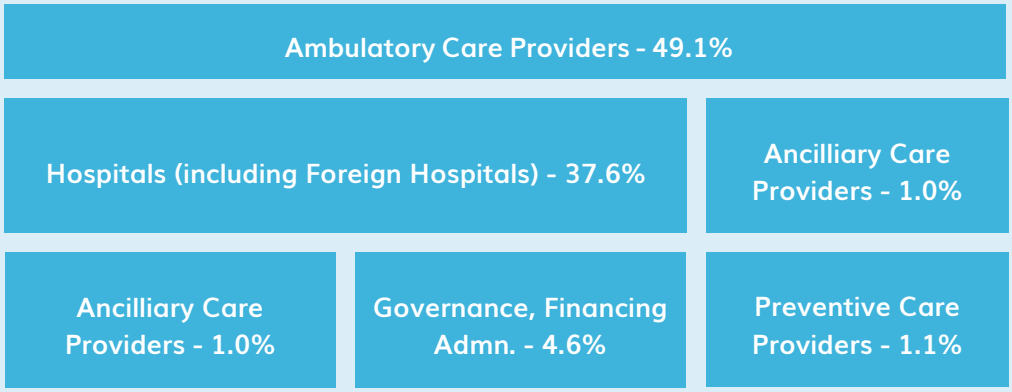
Health Care Providers	Total Expenditure (In MVR Million)	Percentage Share (%)	Per Capita Expenditure (In MVR)
Local Hospitals	860	20.5	2500
Ambulatory Care Providers	2061	49.1	5992
Ancilliary Service Providers	43	1.0	126
Providers of Medical Products	279	6.7	812
Preventive Care Providers	45	1.1	130
Governance & Administration	193	4.6	560
Foreign Providers	718	17.1	2086
Overall	4199	100	12205

Note: *Health care providers described above includes both public and private care providers and the associated expenses. For a break-up of public and private providers and its expenses, please see Section III. Hospitals and ambulatory care expenditure are directly obtained from budget documents for treasury funding while inpatient and outpatient expenditure under Aasandha were treated in respective categories. When the government or the households themselves sought treatment and paid for curative services outside the country, the expenses were treated under the provider category 'Foreign Providers'. It may be noted that this share was quite significant in the Maldivian context, in view of absence of several specialized inpatient treatment at home.*

The SHA, 2011 describes health care providers as the entity that act as the final recipients of health care funds from financial agents/intermediaries. Health care providers can take variety of forms from prevention, promotion, to curative care while at the same time they can also take other forms such as, allopathy and traditional health providers. The health care provider dimensions, as defined by SHA, 2011 is almost akin to functional classification of health care services. Reflecting the similarity, it may be observed that hospitals in Maldives accounted for one-fifth of all resources received. However, if one were to add the amount of resources spent because accessing health care services from foreign providers (hospitals outside Maldives) – 17.1 percent – the combined share of hospitals accounted for 37.6 percent during 2014(Table 2.6 and Figure 2.5).

Ambulatory care providers and the associated expenditure took half of all health spending in Maldives. As explained above, since Aasandha scheme covers outpatient visits and expenditure on medicines as well, which are obtained from both government as well as private outpatient providers, a higher share for ambulatory providers are justifiable. In terms of ancillary care providers, such as, laboratory, imaging services and patient transportation, the share of spending has been negligible while medical goods providers accounted for 6.7 percent during 2014. It may again be noted that a large share of laboratory, imaging services, etc. were bunched together in inpatient and outpatient services. The available data do not allow us to tease out these elements separately. Although medical goods providers accounted for a larger share in 2011, its diminished role is reflected in a higher share among ambulatory providers. In reality, the share of medical goods providers may remain similar, except that due to Aasandha's role in providing ambulatory care besides hospital care, the role of ambulatory care appears to be larger. Expenditure incurred during 2014 suggest that governance function, including health insurance administration, accounted for 4.6 percent of all current health spending in Maldives.

Figure 2.5: **Health Care Providers, Maldives, 2014**



Section III:

Trends and Pattern of Government and Private Financial Flows in Maldives

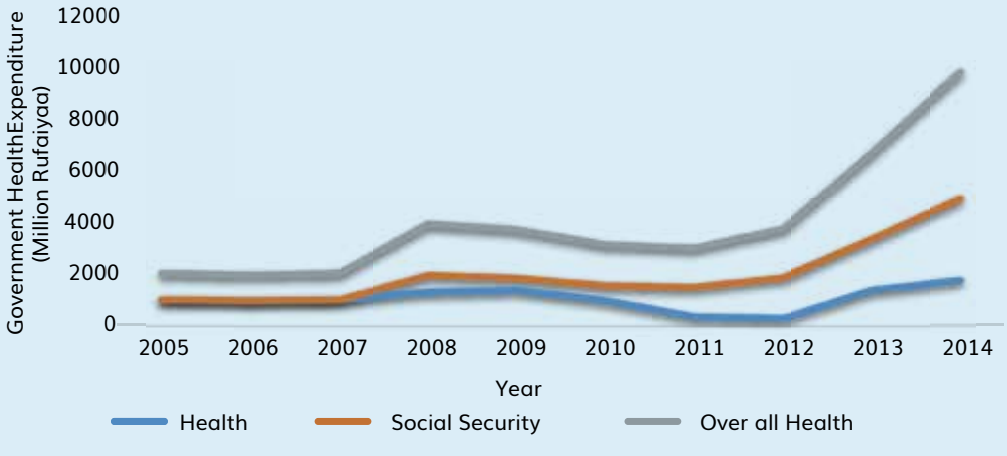
The overall rise in health spending in Maldives during 2014 is contributed by a combination of a considerable step up in both health ministry spending and social security expenditure

We now turn to present the comparative scenario of funding flows from two major contributors, namely public funding including development partner assistance and private sector spending including households, private enterprises and non-governmental organisations.

III.1: A Comparative Scenario of Government Funding in Maldives, 2011 and 2014

The foregoing analysis clearly reveals that government funding in health sector witnessed sharp and significant acceleration during the period from 2011 until 2014. The overall rise in health spending is contributed by a combination of a considerable step up in both health ministry spending and social security expenditure, that is devoted to providing health insurance for inpatient and outpatient services.

Figure 3.1: **Trends in Government Health Expenditure in Maldives, 2005-2014**



Further, the pattern of health spending by the government have also undergone sharp changes between the period 2011 and 2014 as reported in table 3.1. Notable changes are in the category of salary and allowances. It is possible that a sharp reduction in salary and allowances are due to changes in reporting structure rather than a real reduction in salary and allowances paid for personnel. It may be noted that during 2010-11, health corporations were set up and as a result several employees were employed along with managers/ line managers were appointed. These managers salary were much more higher than the civil services. The allowances such as risk allowances were given to employees. Later in 2012, health corporation were dismantled and therefore the corporation employees were

Table 3.1: Ministry of Health Budget, Maldives, 2011 and 2014

Line Item Budgets	2011		2014	
	Amount	Percent	Amount	Percent
Salary and allowances	40,924,817	61.9	42,428,228	27.4
Pension	1,417,355	2.1	1,523,738	1.0
Travelling expenses	649,979	1.0	2,195,968	1.4
Administrative supplies	1,755,556	2.7	1,893,038	1.2
Administrative services	9,489,438	14.4	14,620,665	9.4
Operational consumables	6,904,162	10.4	20,060,579	12.9
Training expenses	3,721,459	5.6	21,151,075	13.6
Repairs and maintenance	618,381	0.9	21,122,905	13.6
Grants, contributions and subsidies	223,922	0.3	0	0
Losses from private parties	305,650	0.5	0	0
Capital expenditures	66,750	0.1	30,019,445	19.4
Total budget	66,077,469	100.0	155,085,842	100.0

transferred to island councils and related authorities, not related to health. Administrative services and supplies along with operational consumables appear to account for a larger share besides salary and allowances. The larger picture from a comparison of ministry's health expenditure between 2011 and 2014 suggest that the overall increase has been phenomenal from about 66,077,469 MVR in 2011 to 155,085,842 MVR during 2014.

In respect to health insurance expenditure by NSPA, two broad trends and pattern are worth observing (Table 3.2). During 2011, the health insurance expenditure was observed to be over four times compared to MoH budget, while the same increased to over fourteen times during 2014. Between the period 2011 and 2014, the MoH budget witnessed a sharp rise of over 42 percent while health insurance funds witnessed a respectable growth of around 25 percent. As far as health expenditure by functional classification is concerned, three major expenditure items relate to outpatient care, inpatient care and outpatient medicines. While the share of outpatient medicines remained at one-fifth of overall expenditure, the share of inpatient care has remained over one-fifth of all health expenses. On the other hand, the expenses under the category of outpatient care went up phenomenally from around 29 percent in 2011 to over 43 percent in 2014.

Although insignificant, the categories under 'admitted in ward', 'inpatient care in ICU', during 2014 did not record any expenses as these expenses were perhaps clubbed together in inpatient categories. However, it may be noted that the health insurance scheme has also contributed to patient transportation to overseas treatment during 2014, which accounted for a sizeable five percent.

Table 3.2: NSPA Expenditure By Health Care Functions, 2011 and 2014

Functional Description	2011		2014	
	Amount (MVR)	Percentage	Amount (MVR)	Percentage
Out-patient care	76,552,840	28.60	457,978,292	43.1
In-patient care	56,966,349	21.28	241,051,043	22.7
In ICU	2,053,951	0.77	NA	NA
Admitted in ward	52,858,447	19.75	NA	NA
Outpatient medicines	52,853,766	19.74	221,737,345	20.9
Inpatient medicines	11,795,557	4.41	29,752,803	2.8
Circumcision	24,521	0.01	NA	NA
Inter-atoll transport for critical patients	5,856,989	2.19	28,912,583	2.7
Dialysis	1,807,798	0.68	4,354,881	0.4
Medical check-up	3,455	NA	NA	NA
Glasses/lense	6,839,992	2.56	25,939,089	2.4
Overseas Airfare	NA	NA	53,327,081	5.0
Accidental Dental treatments	NA	NA	1,563	NA
Joint/ligament related	83,000	0.03	NA	NA
Total	**267,696,666**	**100**	**1,063,054,680**	**100**

Note: *NA – Not available*

Table 3.3: NSPA Expenditure by Providers, 2011 and 2014

Provider Description	2011		2014	
	Amount	Percentage	Amount	Percentage
Hospitals	120,862,230	56.8	533,912,306	59.7
Pharmacies	64,436,922	30.3	251,490,149	28.1
Opticals	13,453,201	6.3	25,939,089	2.9
Clinics	6,964,381	3.3	17,272,152	1.9
Hospital outside Maldives (Air Tickets)	7,052,011	3.3	65,434,338	7.3
Total	**212,768,745**	**100**	**894,048,033**	**100**

In respect to distribution of health insurance funds by provider categories, it may be noted that hospitals, both government and private providers together, accounted for the bulk of health insurance funds, which accounted for nearly 60 percent in 2014 (Table 3.3). Hospitals treatment here includes both outpatient and inpatient care expenditure which is contributed by health insurance funds of NSPA. The expenditure associated with paying for drugs and supplies by the health insurance funds has been in the range of 28-30 percent. As noted earlier, expenses associated with air tickets paid for patients visiting hospital providers outside Maldives has increased significantly from about three per cent in 2011 to over seven percent in 2014.

Table 3.4: Sources of Private Insurance Funds, 2011 and 2014

Type of Source	2011		2014	
	Amount	Percent	Amount	Percent
Employer contributions/ premiums	19,120,485	20.9	19,984,678	22.0
Group contributions/ premiums	733,418	0.8	66,291,623	72.9
Individual contributions/ premiums	63,554,904	69.4	4,694,186	5.2
Grants from Government	8,200,557	9.0	NA	NA
Total	**91,609,364**	**100**	**90,970,487**	**100**

Note: NA – Not available

The private market for health insurance is estimated to be 90 million MVR during 2014. It may be observed from Table 3.4 that the share of private voluntary insurance schemes as compared to tax funded health insurance scheme is in the range of eight percent. The overall private voluntary health insurance sector has remained almost stagnant at that level during the period between 2011 and 2014. This could be the result of a significant expansion of tax funded health insurance schemes, where government is contributing the entire premium on behalf of patients without any maximum caps. It may be worth noting that individual contributions that accounted for the bulk of private insurance premium during 2011 has almost become negligible in 2014, from nearly 70 percent to over five percent during this period. Therefore, individuals do not have the incentive anymore to enrol into voluntary private insurance schemes since the government pays entirely for them. Group contributions along with employer contributions accounted for roughly 95 percent of all private insurance funds in 2014.

Table 3.5: Households OOP Expenditure in Maldives, 2011 and 2014

Functional Description	2011		2014	
	Amount ('000)	Percent	Amount ('000)	Percent
Inpatient curative care	59,132	4.30	59,880	4.73
Inpatient treatment abroad	656,176	48.10	664,227	52.49
Outpatient curative care (without dentistry)	263,393	19.30	266,624	21.07
Outpatient dental care	845	0.60	8,572	0.68
All other specialized health care (traditional healer curative care)	8,073	0.60	8,194	0.65

Functional Description	2011		2014	
	Amount ('000)	Percent	Amount ('000)	Percent
Medicines	250,066	18.30	253,135	20.01
OOP Registration fee towards MoH	22,166	1.60	NA	NA
Individual Premium paid to health insurance	97,917	7.20	4,694	0.37
Sum Total of above	1,365,373	100	1,265,327	100

Note: *NA – Not available*

Households' in most countries have tended to report a rising share of health expenditure, except countries such as Thailand, China, etc. in recent years. Maldives also appears to fall into the exceptional category of country, wherein for the period between 2011 and 2014, the overall households' spending witnessed a decline in absolute levels from about 1365 million MVR in 2011 to 1265 million MVR in 2014 (Table 3.5). The absolute decline in households' spending could be the direct result of a sharp and significant rise in public spending contributed by MoH and NSPA budgets. It may be noted that over half of all households' expenditure went into buying treatment from hospitalisation abroad. Outpatient curative care and medicines from pharmacies accounted for about one-fifth each in households' overall expenditure during the period under consideration.

III.2: Trends and Pattern of Pharmaceutical Expenditure, Maldives, 2011 and 2014

Pharmaceutical expenditure plays a significant in the overall health spending of a nation. In the context of Maldives, several sources of funds that flow into the health system for buying medicines are identified. To make estimates consistent, we have included medicines, vaccines, consumables, and other supplies under the category of pharmaceutical expenditure. It is estimated that the spending on medicines and supplies accounted for MVR 780 million during 2014 as compared to MVR 470 million in 2011 (Table 3.6). This works out to over 18 percent of all health spending in Maldives for the period 2014 was spent on pharmaceuticals as against 17 percent expenditure during 2011.

Table 3.6: Medicines and Supplies Expenditure, Maldives, 2011 and 2014

Description of Source	2011	%	2014	%
MoH Funds	1,14,95,233	2.44	27,55,88,675	35.31
NSPA Funds	18,14,59,639	38.57	25,14,90,149	32.22
Households' OOP	25,00,65,925	53.15	25,31,35,032	32.43
Others (Enterprises, Private Insurance, etc.)	2,74,67,497	5.84	2,60,094	0.03
Total	**47,04,88,294**	**100**	**78,04,73,949**	**100**

Note: *MoH – Ministry of Health funds include expenses at IGMH, Hulhumale, Villimale and Dhamanaveshi, Atoll Health Facilities. NSPA funds for medicines and supplies are expenses incurred by insurance route for purchase of medicines by patients from the private pharmacy directly besides spending at the government health facilities.*

It may further be noted three sources constituted one-third of pharmaceutical spending, with MoH direct funds through government health care providers constituting about 35 percent of all medicines spending. Another government funding route for supplying nearly one-third of medicines and supplies is through NSPA funds. Overall, if Ministry of Finance's funds were taken into account, routed through direct MoH funds and NSPA funds, two-thirds of Maldives pharmaceutical market is funded through government alone. While households' OOP constituted the rest one-third of funds directed to medicines purchase. However, it may be useful to note that during 2011, the burden on households was almost half of all spending on medicines. This has dramatically reversed in 2014 with government contributing the maximum of funds towards medicines purchase. As noted in the NHA 2011, the challenge that confronts the pharmaceutical sector in Maldives is overpriced medicines who prescription occurs in brand name rather than generics. The government has enormous scope to contain cost, if it were to procure drugs directly from the manufacturers and does it strictly by adhering to generics drugs. The 'others' category under medicines and supplies include expenditure by enterprises, private insurance, etc. It may be observed that there is a sharp and significantly decline in spending by 'others' category, which could be due to the fact NSPA has taken on the role of providing drugs free, reimbursed to households for purchase of drugs from private pharmacies.

Section IV:
Policy Direction and Institutionalisation

Maldives has reached a stage where levels of health expenditure is notably adequate to meet its health needs, but several steps are required to realign spending pattern so that services are delivered effectively, resources utilized efficiently and funds distributed equitably.

IV.1: Future Policy Direction

Given its status as an upper middle-income economy, Maldives' health system financing truly reflects its standing, as its health spending not only reflects the average of OECD countries, but continues to sustain the momentum in the recent past. As per the current estimates from NHA 2014, Maldives spends little over nine percent of its GDP on health care. The magnitude of health expenditure is almost similar to the levels witnessed during 2011. However, the pattern of country's health spending underwent significant changes, as prepaid and risk-pooled funds dominate now. Barely half of all spending during 2011 was prepaid and risk-pooled, as against 70 percent currently. This was made possible by a comprehensive coverage of both public health system and Aasandha health insurance scheme, financed primarily by tax funds. As a result, it is evident that households' OOP declined significantly from nearly half of all health spending in 2011 to 30 percent in 2014. In absolute levels, the per capita OOP spending dropped significantly from MVR 4267 in 2011 to MVR 3677 during 2014 (measured in current prices). Maldives has reached a stage where levels of health expenditure is notably adequate to meet its health needs, but several steps are required to realign spending pattern so that services are delivered effectively, resources utilized efficiently and funds distributed equitably. Additional efforts also need to be made on prevention, early detection and diagnosis to promote a healthy life style and reduce disease burden.

IV.1.1: Realign Health Funds for Prevention and Promotion

The demographic shift and the associated epidemiologic transition is a critical challenge confronting Maldives presently. From a bottom-heavy pyramid about couple of decades, the demographic structure of Maldives currently appears to be moving towards top-dense, as longevity has resulted with a substantial rise in elderly population. The rise of non-

communicable diseases is certainly a pointer to this epidemiologic transition. Therefore, financial resources required to meet the ever increasing demands of a double or triple burden of disease is the need of the hour. While the current levels of resources are adequate to meet health burden, a lot of disease conditions, both chronic and acute in nature, require plans and programs that could be prevented at primary care levels. Global evidence suggests that primary care prevention including population level screening, continuous monitoring and surveillance, can go a long way in preventing several disease conditions from emerging and as a result could help reduce cost. While the current evidence suggest that financial resources allocated by the government is barely less than two percent, which requires to be accelerated substantially. It may be plausible that the government may be spending much more than what is being captured by the availability of data, but even assuming that it may be double or triple the current level, the share of spending for prevention and promotion still lacks a minimum level required. The government, thus, is required to reallocate substantial resources to prevention and promotion.

IV.1.2: Move Away from Passive to Strategic Purchasing

One of the critical function of health financing is strategic purchasing. The primary aim of any strategic purchasing decision is to ensure resources are allocated and spent efficiently, promote quality and rationality of care provided to its population and finally allocate resource equitably to geographies and social groups. By setting up standards that are applicable to both public and private health facilities, quality improvements may be reaped for the benefit of patient population. A stringent treatment protocols (Standard Treatment Guidelines – STGs) for treating various disease conditions must be put in place in both private and public facilities, underlying both the integrated model as well as the health insurance scheme. When rational prescription based on STGs were to be implemented in health facilities, this is expected to reduce costs to a large extent while rationality of care is also ensured in the process. In order to strengthen the existing mechanism of procurement and logistic system for drugs, vaccines and supplies, the government may need to improve logistic and information system, improve forecasting and monitoring besides putting in place a cost control mechanism.

IV.1.3: Initiate Cost Containment Measures

Several cost containment measures are proposed for substantial savings to the exchequer. It is proposed that procurement of drugs and supplies be carried out directly from the manufacturers abroad, which is expected to reduce the number of intermediaries and reap the benefit of economies of scale. Secondly, the government needs to promote and allow prescription and dispensing of only generic medicines, and discourage use of patented medicines and branded generics. Procuring and prescribing patented medicines must be allowed only when generic substitutes are not available. Since drugs cost are substantial (roughly 40-50 percent in the case of inpatient while nearly 70-80 percent of outpatient cost contains drugs), enormous cost savings can be obtained, which could then be reallocated for other prevention and promotion programs. Encouraging the rational use of drugs and diagnostic services is also expected to bring significant cost savings. Linking patient care through an integrated information system will reduce duplication of services; improve efficiency and monitoring of health care services.

IV.2: Institutionalisation of Health Accounts

IV.2.1: Create and Sustain an Enabling Environment

Creating and sustaining an eco-system in the production and dissemination of health accounts is perhaps the first critical step. A large network needs to be created for enabling and sustaining the environment. The current initiative of establishing a focal point (Health Economics Unit within the NIH) at the Ministry is certainly a step in right direction. The focal point/unit at the Ministry must regularly lialise with other Ministries, departments of the Health Ministry, and other national/regional institutions that deal with public health, epidemiology, statistics and economics. The focal point must not only ensure that the health accounts and related sub-accounts are produced annually or biannually but must make sure that it is completed well before the end of each in respective financial year. This would help the key findings from NHA estimates to be fed into budget preparation exercise for the ensuing financial year.

IV.2.2: Mobilize Resources for NHA Activities

The production of health accounts is resource intensive – financially as well as materially. However, this may perhaps be true during the setting up of the system – network building, national surveys, etc. Once the network is set-up and its activities begin regularly, the incremental cost to sustain the activities would be rather minimal, leaving aside few nationally representative surveys (NGOs, Enterprises, private voluntary insurance, etc.). The Ministry needs to set aside a minimal amount of funds annually, as part of budget line items, so that surveys are conducted regularly, technical workshops occur on regular basis, dissemination events are conducted annually. Coordination and conduct of technical studies (such as, costing exercise, epidemiological data) between the Ministry and various technical bodies may also require adequate funds.

IV.2.3: Improve Quality of Data Collection

Ensuring robustness and consistency of data collected on an annual basis is vital for the sustenance of NHA exercise. Making survey methods consistent with national and international standards is equally vital for ensuring that the NHA estimates are indeed unbiased and robust. Improvement of data collection and estimation methods must be made robust, by improving sample design of surveys, making it nationally representative, and ensuring vital variables collected in one survey must be consistent with subsequent surveys. Documenting interpolation and extrapolation methods and making it consistent with global standards are equally vital. While efforts must be made to conduct surveys on a regular basis, such as, surveys on NGOs, Enterprises, etc. on a 3-5 year basis. But it would be worthwhile to piggyback on the current/future nationally representative surveys, with a relevant section incorporated. For instance, self-reports of diseases and access to care by inpatient and outpatient along with health utilization data, combined with households' OOP can form part of regular Household Income and Expenditure Surveys (HIES), and Demographic and Health Surveys (DHS).

The current treasury route budgets and its line items are useful for accounting purpose but lacks credible information about program or disease-specific level data. This is a major lacuna, which must be addressed. Although this requires changes underlying all the sectors in the economy, since the Finance Ministry is often tasked with this assignment, the Ministry must make effort in doing so. Similarly, the NSPA (National Social Protection Agency) tasked with running the Aasandha scheme, must produce data by functional and provider level

data, classified by ICD-10 codes. This is essential to link and obtain credible evidence about spending pattern on disease conditions, factors of provision, age, gender and diagnosis and prescription related to each claim. In order to understand the current pattern and drivers of health spending, which is expected to help reallocate resources and reduce cost, such comprehensive data must be made available by NSPA on a regular basis.

IV.2.4: Conduct regular skill building exercise

Building skills and expertise is critical for any system for its sustenance. Regular capacity building efforts must be made so that the current workforce is not only equipped with skills sets, but it is equally critical to sustain that expertise, since trained personnel are often transferred to other department or promoted. Regular training in data management, data analysis, utilization of statistical package, and development of statistical expertise involving forecasting and research methods are required.

IV.2.5: Disseminate NHA evidence annually

Fresh NHA evidence produced annually must be ensured that it is disseminated among all stakeholders and timely communication would also go a long way by way of feeding into planning and programs. New evidence must be produced in a timely manner so that policy-makers and planners get adequate time for discussion, so that resources can scaled-up, reallocated between programs/scheme and cost containment measures put in place in time. Finally, NHA is an important tool to demand accountability and transparency in resources committed and utilized by the government and development partners.

Section V:
The Framework and Methodology

It outlines magnitude and pattern of spending in a country or region, including the sources of funds, different schemes operating in the system, and how that money is distributed by functions, providers and factors of provision.

V.1: The Framework

The framework for this exercise is derived primarily from System of Health Accounts (SHA), 2011. The SHA or NHA (National Health Accounts), present a systematic description of financial flows in the health system in each year. It outlines magnitude and pattern of spending in a country or region, including the sources of funds, different schemes operating in the system, and how that money is distributed by functions, providers and factors of provision. In a sense, SHA outlines health systems activities during a given time period from an expenditure perspective. It may be worth noting that Gross Domestic Product is computed based on the value of current production consumption, expenditure derived from primary, secondary and tertiary sectors. The SHA framework is primarily obtained from the System of National Accounts (SNA). The System of Health Accounts has come to occupy centre stage in health system financing, as it is used by rich western nations as well as Low-and Middle-Income Economies in recent years, both in policy-making and program implementation of health systems.

Three critical boundaries are defined here, which are central to NHA estimation, namely: functional, time and space boundary. The functional boundary relates to health expenditure that are associated with promotional, preventive and curative care spending in Maldives. One of the significant deviation from earlier estimate of NHA for Maldives, relate to current expenditures that are delineated from capital spending. Indicators that are aggregates or/ and proportionate expenditures relate chiefly to current expenditures in Maldives. The time boundary relates to expenditures that are associated with spending that occurred only in the year 2014. While space boundary, on the other hand, relates to all expenditure that are incurred within as well outside Maldives, spent by Maldivians. For instance, a substantial part of in-patient curative care expenditures are incurred and paid for by both individual patients as well as by the government, towards reimbursements of its patients.

The current estimates of NHA for Maldives are presented based on financial flows between different entities, namely health financing schemes, financial agents/intermediaries and revenues of financing schemes, health care providers and health care functions. Four sets of matrices are worked out in this exercise, that includes: i) Health Financing Schemes to Health Financing Intermediaries; ii) Health Financing Schemes to Revenues of Financing Schemes; iii) Health Financing Schemes to Health Care Functions and iv) Health Financing Schemes to Health Care Providers. Since health financing schemes play a central role in the SHA, 2011 framework, its link to other entities are captured here.

IV.2: Data Sources and Allocation Keys

A variety of data sources were obtained to populate the matrices. One of the central database is the treasury funding source of Ministry of Health. In order to delineate recurrent from capital spending, the following codes were combined: I) Recurrent expenditure includes salaries & wages (211011-212999), pensions (213001), transportation (221001-221999), stationary & req. (222001 – 222999), utilities & others (223001 – 223999), medical consumables (224001), medical supplies (224001), scholarship (225001 – 225006), repair & maintenance (226001-226017), and other expenses (228); II) Capital expenditure includes public sector investment program (421), furniture & fittings (423001), machineries (423002) and others (423003 – 423999).

As far as health financing schemes are considered, three components form part of the government schemes. The treasury funding as outlined above are part of financing schemes, along with all the expenses that are reported under Aasandha health insurance scheme, which covers both inpatient and outpatient expenditure. Although the Aasandha scheme is typically a universal health insurance scheme in nature funded entire by the government, while services are purchased both from public and private health care providers. Under Aasandha scheme, neither individuals nor households pay towards the scheme directly, and not mandated to pay for the premiums, this is considered under financing scheme of government. Development partners' contribution, largely paid by WHO, UNICEF,UNFPA, World Bank, etc. are considered as government health financing scheme, since all the resources routed through the government entity is treated as such. Households' OOP contribution takes two form: OOP contribution is treated as households' scheme while if paid towards premium for insurance, it's considered as voluntary health insurance scheme. Contributions made by donors and with its own resources are treated under NPISH (Non Profit Institutions Serving Households). Employers' contribution towards reimbursement for its employees and own facilities by employers are treated under Private Corporations, while its contribution towards premium for its employees are considered under Voluntary Private Health Insurance Scheme.

It may be observed that while the Ministry's own spending is considered as administrative expenses in respect to functional categories, the rest four departments under the Ministry (HPA, MFDA, MBS, NSPA), 20 regional hospitals and atolls are considered under curative and preventive care. For instance, HPA's entire expenditure is part of preventive in nature including immunization, expenses for communicable and non-communicable disease conditions. Preventive and public health cost also include MFDA's food related regulatory work, regional and atoll hospital primary health care unit cost and public health staff expenses of health centres. However, they are not captured under preventive and public health category in this report. While curative care expenditure are clearly delinked from preventive sources (as reported by data sources), expenses relating to outpatient and inpatient were not readily available in a SHA format. Allocation keys to distribute curative

care expenses into inpatient and outpatient for those relating to treasury route funding, were obtained from the ratio of reimbursements provided by Aasandha scheme.

In terms of provider category, hospitals and ambulatory care expenditure are directly obtained from budget documents for Ministry of Finance and Treasury funding while inpatient and outpatient expenditure under Aasandha were treated in respective categories. When the government or the households themselves sought treatment, and paid for curative services outside the country, the expenses were treated under the provider category: Rest of the World. It may be noted that this share was quite significant in the Maldivian context, in view of absence of several specialized inpatient treatments at home.

In the NHA 2011estimates, households' OOP were captured by directly extracting information/data from the national survey conducted in 2009. Since the data were outdated and moreover with significant acceleration witnessed due to Aasandha scheme, one would expect a sharp drop in household's expenditure. The latest national Household Income and Expenditure Survey (HIES, 2016) and Demographic and Health Survey (DHS, 2016/2017) is being completed while the data was expected to be available only in the year 2017. In view of unavailability of household level data, we utilized information/data from the GDP series (based on communication from Ministry of Finance, Households Final Consumption Expenditure on Health, for 2010 to 2015) . The GDP series provides valid and robust data about households spending on health – Final Households Consumption Expenditure – which is used as a proxy for households' OOP spending. By working out growth rate of Households' Final Consumption Expenditure between 2011 and 2014, this rate was applied to OOP figures, as reported in NHA 2011 levels, to obtain the level of households' OOP for the year 2014.

In respect to Non-Governmental Organisations and Private Enterprises, the Ministry of Health (PIH unit) conducted a survey, by eliciting information from respective units, which are considered large and medium ones. The survey was carried out using a structured questionnaire, containing formats that are relevant to SHA categories. The number of NGOs and private enterprises covered through the survey were seven each respectively. Similarly, two private health insurance providers were contacted to obtain data about individuals and enterprises contributing to premiums, in terms of numbers and value of premium, along with information about the nature of such contributions, such as, inpatient, outpatient, drugs spending.

IV.3: Study Limitations

Unlike NHA 2011, we utilized the ratio obtained from Aasandha data for inpatient and outpatient expenses, rather than directly estimating curative care by inpatient and outpatient expenditure, to estimate inpatient-outpatient expenses' break-up for MoH spending. It may be noted that Ministry of Finance and Treasury route budget line items lump together curative or preventive expenses, such as, wages & salaries, drugs & diagnostics, medical supplies, transportation, etc. The functional and provider categories relating to medical goods and providers of medical goods expenses, considers only those spent by households under the category of medical goods. In respect to spending by government on medical goods and supplies, it may be noted that they included either under inpatient and/or outpatient classifications, as per the SHA framework. Since the budget records do not delineate all preventive expenses in a format that is classifiable under SHA categories, we reckon that the overall preventive spending as reported in the NHA may be a gross underestimation. On this note, public health expenditure of health facilities and public health work by other departments and divisions of ministry of health such as MFDA and MBS were

not captured under preventive or public health expenditure. Long term care and expenses relating to home-based care were not captured; similarly, day care expenses, spending on traditional healers and other specialized care expenditure were not obtained. Additionally, the expenses or cost of sea ambulance service operated by Maldives National Defence Force was not included in the current report. However, there are plans to include this in the future NHA. As the current Household Income and Expenditure Survey is in progress, It was not possible to obtain information/data about the funds allocated by households towards Over-The-Counter and prescription drugs. Although ideally one would have utilized nationally representative household survey to obtain estimates of OOP, in the absence of such a survey data, this series of NHA 2014, harnessed growth rates from GDP series, to obtain such an estimate. But the estimate appear to be robust and valid, which clearly shows remarkable decline over the last 3 years, which is on expected lines. However, new sets of household survey data, when released, would provide evidence about the robustness of such an approach. One of the critical gap in obtaining information/data is relating to NGOs and Private Enterprises, including private hospitals and private clinics. In the absence of a nationally representative survey frame, the number of such NGOs and Private Enterprises and firms are neither known nor feasible to apply proportions/keys to obtain a reliable and robust expenditure estimates. Further, government spending on other health insurance schemes provided to selected cadres including cabinet members, parliamentarians and independent commissions are not included in the country NHA. Finally, one of the major gap pertains to absence of statistics about the role of traditional and allopathic medicines and the associated expenditure. Although the NHA 2011 conducted a major survey to elicit information, paucity of time forced us to neglect the magnitude and extent of spending on traditional medicines. It is however hoped that the new set of national Household Income and Expenditure Survey (HIES, 2016) will bring in fresh set of statistics, which will be helpful for obtaining a complete picture of household spending.

Section VI:
Appendices

Matrix 1: Financing Schemes to Financing Agents

Financing Scheme Classifications	FA.1 General Govt.	FA.2 Insurance Corp.	FA.3 Private Corp.	FA.4 NPISHs	FA.5 House holds	FA.6 Rest of World	All Financing Agents
HF.1 Government Schemes	1690.24	1118.28	0	0	0	25.48	2834.00
HF.2.1 Voluntary Health Insurance Schemes	0	81.58	0	0	0	0	81.58
HF.2.3 Enterprise Financing Scheme	0	0	3.18	0	0	0	3.18
HF.2.2 NPISH Schemes	0	0	0	14.53	0	0	14.53
HF.3 Households OOP Payments	0	4.69	0	0	1260.63	0	1265.33
Overall Expenditure	1690.24	1204.55	3.18	14.53	1260.63	25.48	4198.63

Note: Codes and categories included in the matrix above are relevant to Maldivian context, while codes and categories are based on SHA 2011.

Matrix 2: Financing Schemes to Revenues of Financing Schemes

Financing Schemes/ Revenues of Schemes	FS.1 Transfers from Govt. Domestic Revenue	FS.2 Transfers Distributed by Govt. from Foreign Origin	FS.5 Voluntary Prepayments	FS.6 Other Domestic Revenues	Overall Expenditure
HF.1 Government Schemes	2808.52	25.48	0	0	2834.00
HF.2.1 Voluntary Health Insurance Schemes	0	0	81.58	0	81.58
HF.2.3 Enterprise Financing Scheme	0	0	3.18	0	3.18
HF.2.2 NPISH Schemes	0	0	0	14.53	14.53
HF.3. Households OOP Payments	0		4.69	1260.63	1265.32
Overall Expenditure	2808.52	25.48	89.46	1275.16	4198.63

Note: Codes and categories included in the matrix above are relevant to Maldivian context, while codes and categories are based on SHA 2011.

Matrix 3: Financing Schemes to Health Care Functions

Financing Schemes/ Functions	HC.1.1 Inpatient Care	HC.1.3 Outpatient Care	HC.4 Ancillary Services	HC.5 Medicines & Other Goods	HC.6 Preventive Care	HC.7 Governance, Financing Administration	Overall Expenditure
HF.1 Govt. Schemes	711.31	1774.47	96.02	25.93	40.68	185.58	2834.00
HF.2.1 Voluntary Health Insurance Schemes	81.58	0	0	0	0	0	81.58
HF.2.3 Enterprise Financing Scheme	0.01	2.91	0	0.2	0	0	3.13
HF. 2.2 NPISHs	2.46	0.51	0.5	0	3.95	7.07	14.53
HF.3 Households OOP Payments	728.80	283.39	0	253.13	0	0	1265.33
Overall Expenditure	1524.17	2061.29	96.52	279.53	44.68	192.65	4198.63

Note: Codes and categories included in the matrix above are relevant to Maldivian context, while codes and categories are based on SHA 2011.

Matrix 4: Financing Schemes to Health Care Providers

Financing Schemes/ Functions	HP.1 Hospitals	HP.3 Providers of Ambulatory Care	HP.4 Providers of Ancillary Services	HP.5 Providers of Medicines & Other Goods	HP.6 Providers of Preventive Care	HP.7 Governance, Financing Admn.	HP.9 Rest of World	Overall Expenditure
HF.1 Govt. Schemes	711.31	1774.47	42.69	25.93	40.68	185.58	53.32	2834.00
HF.2.1 Voluntary Health Insurance Schemes	81.58	0	0	0	0	0	0	81.58
HF.2.3 Enterprise Financing Scheme	0.01	2.91	0	0.2	0	0	0	3.19
HF.2.2 NPISHs	2.46	0.51	0.5	0	3.95	7.07	0	14.53
HF.3 Households OOP Payments	64.57	283.39	0	253.13	44.63	0	664.22	1265.33
Overall Expenditure	859.95	2061.29	43.19	279.53		192.65	717.55	4198.63

Note: *Codes and categories included in the matrix above are relevant to Maldivian context, while codes and categories are based on SHA 2011.*

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